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ABSTRACT

During the past year and a half, the University of Toledo has developed a competency-based model for teacher education, the basic elements of which are (a) the explicit statement of performance objectives, (b) one or more sets of instructional procedures specifically designed for attainment of each objective, and (c) criterion-referenced evaluation procedures to assess student performance with respect to stated objectives. Due to concern over criticism of the CBTE program, the secondary education faculty completed a retreat to critically evaluate their experiences in implementing the program. This evaluation exposed gaps in the program. Some of these can be identified as a weak affective component, inadequate staff utilization, a need for greater branching within the program (i.e., individualized instruction), and a lack of "Gestalt" as perceived by students. In addition, the support system needs reexamination to determine whether the program has been corrupted by the delivery system developed and implemented by the faculty; objectives need to be reassessed for integrity and then tested empirically. The retreat also resulted in suggestions of areas which the original conceptual scheme might have neglected, and a number of potential research questions to aid in further evaluation. (The preliminary retreat agenda is included.) (PB)

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THE UNIVERSITY OF TOLEDO

Department of Secondary Education

PREVENTING A SECOND ORTHODOXY: A FORMATIVE EVALUATION OF A COMPETENCY-BASED TEACHER EDUCATION PROGRAM

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PREVENTING A SECOND ORTHODOXY: A FORMATIVE EVALUATION OF A COMPETENCY-BASED TEACHER EDUCATION PROGRAM

Introduction

The secondary education faculty of the University of Toledo recently completed a day and a half retreat in order to engage in critical evaluation of their experience in implementing a competency-based teacher education (CBTE) program. During that time dozens of research questions were generated that may eventually lead to resolution of several vexing concerns of the faculty. Some of these concerns were typified in the following questions:

1. How can optimum utilization of staff for both on and off campus program components be achieved?
2. How can public and private school personnel be incorporated in this effort to realize the best possible educational design for an effective teacher education program?

The basic philosophical issues, perceptions and feelings that constitute the complex, sometimes disparate, "Gestalt" of the individual and collective faculty were explored. The questions and discussions held during this retreat comprise the remainder of this monograph.

Overview

At a regular secondary education department meeting held several weeks prior to the retreat, the chairman voiced concern about criticism of the CBTE program that had come to his attention. Several professors in their respective classes were raising serious questions and criticisms of the secondary CBTE program. Furthermore, a memo had been circulated to the college of education faculty calling for a reappraisal of the content, objectives, and overall direction of CBTE efforts

The importance of this department meeting cannot be overlooked. If this meeting, which became a "rap session", had not been held, it is speculative

that this formative evaluation would have been possible in this stage of our departmental development. After his initial observation the department chairman encouraged the rest of the faculty to share their concerns. The major concerns voiced by the faculty were (1) inappropriate staff utilization and assignment of responsibilities within the CBTE program, (2) ineffective communication among faculty members and faculty teams, (3) mounting alienation among faculty members and faculty teams, (3) mounting alienation among faculty and student groups with respect to certain aspects of the CBTE program, and (4) corruption of the original intentions of the University of Toledo model for competency-based teacher education. During the meeting it became apparent that the time had come to reappraise and formatively assess the implementation efforts of the past three years.

Three ad hoc faculty members were assigned to meet with the chairman of the Division of Curriculum and Instruction. This group informed the chairman of the varied concerns expressed by the faculty and requested a retreat to provide an opportunity to explore and assess the progress in establishing and implementing the Secondary CBTE Program. The division chairman and college administration agreed to support the request and a site was chosen.

The ad hoc faculty committee was further charged with developing an agenda for the retreat. A preliminary agenda was formulated as a series of questions and concerns which had been articulated by a variety of faculty members and students. The preliminary checklist agenda (shown in Appendix A) was distributed to faculty members for ranking and evaluation prior to the retreat.

History As Context

In order to assess the efforts of this faculty to engage in a formative evaluation and validation of their program and to re-examine its direction, implementation and prospects, it is perhaps useful to consider both the recent development of the Secondary CBTE Program at the University of Toledo and its unique characteristics.

The Development of the University of Toledo Secondary CBTE Model

During the past year and a half, the University of Toledo has been one of a growing number of colleges of education to develop a competency-based model for teacher education. This model incorporated behavioral specifications, pre-service and in-service teacher training, individualized instruction, and criterion-referenced evaluation. Five specific areas of teacher competency were identified and included in the teacher education program; namely, instructional organization, societal factors, teaching-learning processes, educational technology, and research.

The basic elements of the CBTE program are:

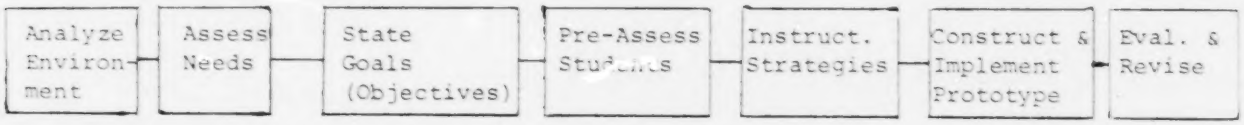
(1) the explicit statement of performance objectives,

(2) one or more sets of instructional procedures specifically designed for attainment of each objective,

(3) criterion-referenced evaluation procedures to assess student performance with respect to stated objectives.

A crucial operation in the design of the CBTE system is the decision about which objectives should be included in the program. It would seem logical that this decision should be based upon what the "successful" teacher should be able to do. Faculty members are usually able to state what their students should be able to do upon completion of the course or program. A process was needed, however, to enable one to generate a comprehensive list

of skills that incorporated most, if not all, critical aspects of teaching. The following model of the teaching process was used to conceptualize what a teacher actually does.



This model was found to be useful for the following reasons:

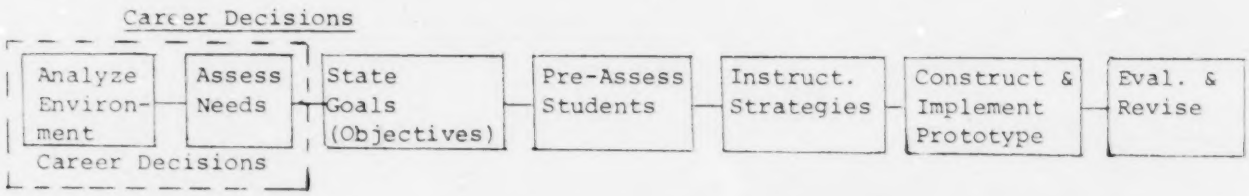
1) The model depicted a general instructional sequence.

2) Most actions of a teacher could be subsumed under at least one of the functions of the model.

3) Each of the functions could be conceived as a broad skill. A task analysis of each of these broad skills yielded several learning hierarchies of enabling objectives. These hierarchies were comprehensive and included the majority of objectives which are included in the secondary CBTE program.

The diagram below depicts the relationship of the process model to each of the existing secondary courses. Note that the final course in the sequence, Secondary Teaching and Learning III, requires the preservice student to demonstrate competence in each of the performance areas of the model, while prior courses concentrate upon parts of the model.

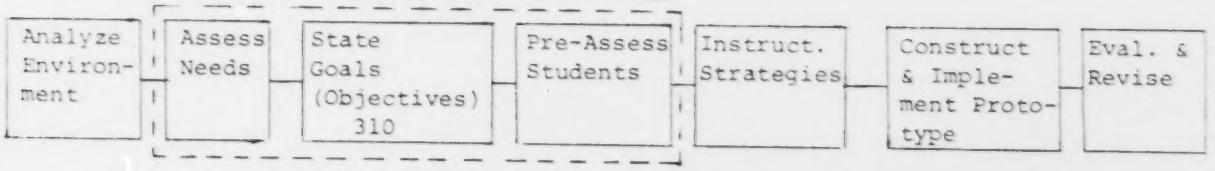
Description of Individual Courses in the Model



Career Decisions (CD) 101 and 102 is usually taken during the freshman year and provides data to the potential teacher to evaluate himself and his future occupation. The first four hour CD experience acquaints the potential teacher with his personal potential as a teacher, various school situations, (urban, suburban, rural, elementary, secondary), the university courses of study, and alternative career choices.

The second phase of an eight hour block specifies needs -- both those of the pupil and of the teacher. The "analysis of values" component requires that the potential teacher question his own values concerning education and the requirements of society.

Secondary Teaching and Learning I - 310



The second course in the secondary education program, Secondary Education 310 deals with the above components of the systems model. This course is usually taken during the junior year to be immediately followed by Education 340 and 392.

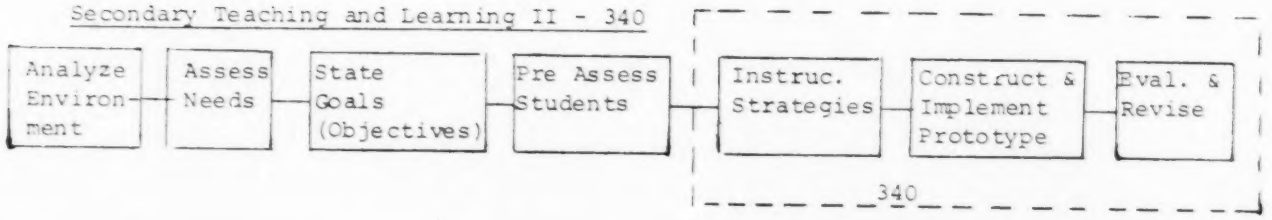
Techniques of gathering data about students' needs are initially developed in Career Decisions. These skills are further developed in Education 310 modules, topically identified as Behaviors and Inferences, in which preservice teachers are required to differentiate between pupil behavior and teacher inferences about pupil behavior. The students are also required to view classroom behaviors of pupils and make inferences about them. Another module entitled Analysis of the Learning Setting explores human needs theories. Students use these theories to interpret pupil behavior. These competencies are also used in a field module that applies observational, inferential, and judgmental skills to assess pupils' needs.

Goal identification is introduced as part of the model involving the identification of instructional intent. In a module entitled Behavioral Objectives students learn how to write acceptable objectives in the cognitive, affective and psychomotor domains. In another module designated Hierarchical Structure students learn to recognize various levels of Bloom's Taxonomy and

write instructional objectives for each level. Included in this module are the development of objectives for concept learning and identification and creation of principles and generalizations within each subject matter discipline.

Students in Secondary Education 310 have learning activities related to the area of assessment. The module entitled Assessment and Evaluation, Test Construction and Analysis requires the writing of appropriate test items for behavioral objectives at each of the levels of Bloom's Taxonomy. Interpretation of teacher made and standardized tests are also included in this module package. The module designated Analysis of Learning Setting deals with the use of testing skills at two levels. The first level is an analysis of teacher behavior in the school social system while the second is concerned with an analysis of pupil behavior in the social setting. Various social-psychological concepts are used as the basis for analysis and interpretation of behavior.

The Field Performance module is a synthesis module in 310. This module provides the student with an opportunity to apply the skills learned during previous modules and expands his knowledge in areas of interest to him. Field objectives related to observing behaviors and making inferences, classifying and rewriting teacher's objectives, analyzing teaching in terms of the instructional model, analysis of tests, and suggesting alternative instructional strategies for pupils in need of remediation require that the student begin to apply concepts and skills previously taught within the campus course.



The emphasis of third course in the secondary education program, Secondary Education 340, is the design, implementation and evaluation of actual teaching. Elements of the teaching model developed in the course are instructional strategies, construction and implementation of learning units, evaluation, and revision of learning activities.

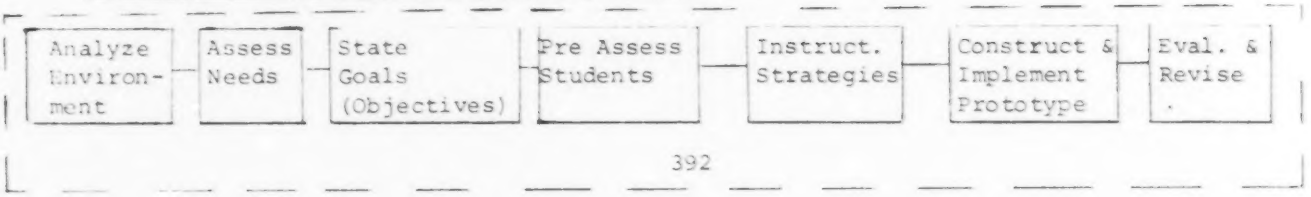
During the Instructional Strategies module, the student begins to acquire skills in inquiry teaching, lecturing techniques, questioning, reception learning modes, and mediated instruction. These skills are applied in the field throughout the quarter in a concurrent field experience or in a micro-teaching setting.

Within the Construction and Implementation module, the student designs instructional units, selects and produces appropriate media, and learns specific behavior management techniques. During the Evaluation and Revision module, the student develops both formative and summative evaluation techniques and strategies for revision of units.

Critical to the development of competence is the completion of what is known as the "intensive unit" assignment. The prospective teacher must design a five-day unit that includes behavioral objectives, pre- and post-tests, and instructional strategies based upon the needs assessment. He then must demonstrate mastery of the behavioral objectives.

A micro-teaching clinic is also utilized in 340 to help the student acclimate himself to "performing" in front of secondary students and to gather first hand data about his "controlled" teaching performance without fear of failure in terms of a grade.

Secondary Teaching and Learning III - 392



The final course in the sequence is Secondary Education 392. Previously known as student teaching, this course has now taken on a new role in the CBTE program.

Prior to 392, students have had much time in the field. Pre-service students have essentially been screened by potential cooperating teachers; cooperating teachers have also been observed by students. As a result, experiences in 392 are somewhat different from the traditional student teaching program. A major difference is the entering behavior of the student teachers. They have already field tested some basic teaching skills and identified areas of potential strength and weakness in their teaching repertoire of behaviors. Thus, they exhibit a greater degree of confidence than in the previous program and, at the same time, have set higher expectations and standards for performance. Rather than viewing this as the first real teaching experience, student teaching is now viewed as an extension of previous field service and a time for polishing and developing rather than the initiation of new learning.

A second variation of this extended field experience is the utilization of specific behavioral competencies to be demonstrated by the pre-service teacher within the ten week period. This means that demonstration of specific teaching behaviors is required prior to the final evaluation of the student teacher and the assumption of a first year teaching position. While no specific teaching

strategy is designated as "best", we do require that a variety of instructional strategies be demonstrated so that the first year teacher will be able to make choices between appropriate modes of teaching behavior. Many of these requirements are directly related to the objectives in 310 and 340.

Behavioral objectives with specific performance criteria have been developed around the following areas of teacher performance:

1. Structured Observation,

2. Instructional Design and Implementation, which includes

   a. instructional strategies and demonstration,
   b. media selection and utilization,
   c. assessment and evaluation, and
   d. individualizing instruction, and

3. Teacher Role Analysis.

A weekly seminar accompanies the 10-week student teaching experience. The purposes of this seminar are varied and include:

1. Extension and sophistication of skills previously learned; e.g., improvement of reinforcing behavior, questioning skills, test construction, classroom management, etc. This part of the seminar is individualized and performanced based on a contractual basis.

2. Introduction of additional professional educational topics such as the teacher and the law, NEA and Unions, interviewing techniques, etc. This section of the seminar is student instructed.

3. Micro-teaching laboratory experience. Micro-teaching will be utilized to help student teachers refine specific teacher behaviors. This is conducted in several nearby public schools with secondary students participating during their study-halls. Such micro-teaching is an extension of that done in 340.

4. Analysis of teaching. Through the use of audio- and video-tapings student teachers will provide analysis of their teaching and receive peer and professional feedback in a seminar setting.

A Personalized Approach to CBTE

The secondary CBTE program at the University of Toledo embodies two features which are believed to be of critical importance in any teacher ed. program. A dominant characteristic of the program must be the conceptual and organizational structure. As presented previously, the CBTE program is composed of a four course sequence in which teaching competencies are developed within each area of the systems model. While this systems framework is useful in organizing the educational experiences of our pre-service teachers, it does not purport to represent an entire approach to teacher education. In addition to preparing teachers who are able to demonstrate specific teaching behaviors, the CBTE program intended to assist pre-service teachers in developing a personal teaching style that is congruent with individualized instructional opportunities for public school students.

Embodied in the course requirements are objectives which require teachers to plan and implement the following kinds of educational procedures:

1. a mastery learning approach.
2. development of pre- and post-test devices to assess pupil entry behavior and learning outcomes.
3. development of alternative instructional strategies for the same objectives.
4. planning units of learning with multi-media learning resources.
5. revising a learning unit on the basis of evaluation of instructional effectiveness.
6. providing remedial experiences for pupils who fail to demonstrate mastery of objectives.

The above behaviors provide basic entry competencies for any teacher who wishes to develop a broad-based approach to individualizing his instruction.

The Toledo secondary program attempts to model this broad-based approach to individualizing instruction in the process of training teachers. Pre-service teachers exhibit differences in learning style, time requirements, need for alternative learning structures, need for alternative instructional procedures, and choices of objectives in much the same manner as the pupils they will teach.

A major reason for developing and implementing a CBTE approach to secondary teacher education at The University of Toledo was to provide a greater personalized dimension in the professional training program. This "personalization" is apparent in four important program components: Objectives, Instructional Procedures, Pacing and Criteria for Evaluation.

Objectives in a traditional teacher education program are often known only to the professor. Moreover, most traditional programs require all students to meet the same objectives, assuming that each student has equivalent prerequisite skills. Pre-tests are not utilized as a means of assessing needs and thus individualizing objectives. The Toledo Secondary CBTE Program provides students with publicly stated performance objectives as well as optional objectives which students may choose because of interest and/or need.

Traditional programs assume the existence of a uniform learning style and hence lack a variety of instructional procedures related to specific objectives. The Toledo Secondary CBTE Program utilizes a large variety of instructional techniques, ranging from self-instruction to group projects. Such procedures are determined after objectives have been written and analyzed. Many objectives allow for several alternative means of reaching competence and this decision is determined by the student.

Most traditional programs operate on a constant time dimension, usually a quarter or semester system. Each student must complete the requirements in the same amount of time, thus letting time remain constant while allowing achievement to vary. The Toledo Secondary CBTE Program recognizes that each person may require differing amounts of time to reach competence and allows for such differences in evaluation. A recycling component affords each student the opportunity to utilize additional time to master a specific skill. The pre-testing component provides an opportunity for students to demonstrate competence and thus move beyond specific mastered objectives. While The University of Toledo does operate on a quarter system, a person may utilize more than the ten week quarter to complete module requirements.

The criteria for success in traditional programs are often vague, capricious and known only to the instructor. Evaluation is most often based upon a norm-referenced base such as the normal curve. The student is at the mercy of his ability to guess the appropriate standard of evaluation. The Toledo Secondary CBTE Program utilizes a criterion-referenced basis for evaluation. This means that each student is evaluated against a publicly-stated set of measurable criteria rather than being treated as part of a mass in which students are evaluated only in relation to each other.

In addition to the above CBTE attributes,the University of Toledo of program also utilizes a team teaching approach in all of its coursework. Teaming not only provides the student with a variety of faculty viewpoints throughout each program component, but also fosters a constant synthesis of material during instruction. Team teaching decreases the faculty-student ratio,thus increasing faculty-student interaction.

Philosophical Foundations of a CBTE Program

If the purpose of a teacher education program is to prepare teachers who can stimulate inquiry, certain assumptions indicate a competency-based approach as the most appropriate framework for achieving this goal. These assumptions include optimization of staff strengths and effort, and optimization of student strengths and effort.

Foundations of a CBTE Program

Essential to any CBTE program is the concept of mastery learning. From the pool of specific objectives that comprises the total teacher education program, the CBTE student demonstrates one by one that he has "mastered" each concrete and measurable objective. Mastery is measured by pre-assessing entry skills and post-assessment after suitable instruction.

To accomplish student success (mastery), instructional treatments must be as varied as the students involved in the program. The student-learner selects the instructional modules that best suit his needs. Need is mutually determined by staff and student. Student selection may include any of the following: objectives, instructional strategies, or educational media.

Self-pacing is an important feature of the CBTE program. To become a "competent" teacher, the student establishes his own pace either to enrich his skills or to remediate (recycle) his weaker skills.

Field testing of objective mastery is a vital component in the CBTE program. Not only must the student demonstrate his theoretical knowledge, but he must also be able to transform this theory into practice in an actual teaching situation.

Differentiated staffing is crucial to the success of the CBTE program. Just as individual students have individual strengths and weaknesses, staff members can best effect student change by utilizing their personal strengths.

Unresolved Issues and Concerns

In a program based on mastery learning, the kind and quality of objectives is crucial to the effectiveness of the program. It is important that individual objectives be validated to ensure that the overall objective of developing skills that can be used to stimulate student inquiry is achieved.

Does a CBTE program perpetuate the myth of human equality among teachers? If all students pass through the same educational program, meeting the same basic objectives, and varying instructional means to master these objectives, is that program not promoting conformity rather than diversity (HOMODULARIZATION). Only when the power is shared between student and staff in determining student program can the goal of addressing each student as an individual be met.

A constant danger inherent with the concept of CBTE is that the program will retain a skill-based thrust focusing on specific individual behaviors rather than promote an integration of experiences which produces a "whole" teacher. This characteristic is an artifact of having performed task analysis and generated specific performance objectives for module building. One extension of this process is that the modules developed become seen as being sufficient unto themselves rather than as clear parts of a fully integrated larger experience. While such a program may have great strength in that it produces a student equipped with cognitive teaching skills, the same student may have incurred a deficit in his inability to synthesize and transfer these skills in his field-based teaching experiences.

Instructional members of the team cannot simply plug all the holes in the program. Each member must feel comfortable with the role he is playing within the team. Just as differentiated staffing should serve the needs of the student population, so should it enhance the relationships existing within the team. Such questions as who will work in the program, what role he will play, where he will be working (in the field or the college classroom) and when he will be responsible for instruction are key to the proper functioning of the program.

CBTE is a criterion-referenced program; therefore the program must deal with the problem of grading. The program produces a competent teacher, not an "A" teacher. How many competently mastered objectives equal an "A" teacher so that such an entry may be registered on the student record?

How does one motivate the student in those areas of the program that are pre-determined by the team? All students see that the result of the program is to become competent. While the student proceeds through the program towards competency, he may lose incentive. He may do what is required, but no more, no less. The student has been given freedom but perhaps not the incentive to use this freedom to his best advantage. These are the age-old problems of the educator and not unique to the CBTE concept.

It is difficult to build a strong affective component into the CBTE program. In his book The Professional Education of Teachers, Art Combs raises several goals for teacher education that pose problems for a CBTE program. First Combs suggests that as much time should be spent exposing and sensitizing teachers to the complexities of personality structure (their own and their students) as in the introduction of knowledge. Opportunities should be provided to develop more positive self-other perceptions. Finally Combs encourages the teacher educator to assist teachers in discovering and

developing the most effective ways of communicating knowledge. Such communication is more than a process of presenting information. It is also a function of discovery and the development of personal meanings. How critical to the CBTE program is this whole affective component! How short of Comb's goals does the secondary education program at The University of Toledo fall?

At The University of Toledo, the secondary education team members have concurred that the present CBTE program is necessary, but that it is not sufficient. All components of a CBTE program cannot be measured in pre-and post-test terms. The present program must further develop a secure unmodularized arena where students feel open enough to discuss themselves in terms of who they are, where they are going, and how or if they want to change. This unmodularized arena would also encourage students and staff to discuss such public concerns as views toward corporal punishment, self-paced instruction, etc.

The present program at The University of Toledo must sustain change while broadening its base.

Conclusion

Evaluation implies research. The critical components of the CBTE program and the distinct artifacts of the model suggest certain directions for research.

The objectives need to be reassessed for integrity. When that process has occurred, the objectives must be tested empirically.

The support system needs re-examination. Has the program been corrupted by the delivery system developed and implemented by the faculty?

Gaps exist in the program. Some of these have been identified; namely, a weak affective component, inadequate staff utilization, a need for greater branching within the program (individualized instruction),and a lack of "Gestalt"

as perceived by the students. Other gaps may surface as the program moves into the research stage.

Establishing A Direction for Validating the Secondary CBTE Program

Formative evaluation of any continuous learning experience presumes assessment of the answers of at least two basic questions. At the base level the face validity of the program must be re-examined as the program has been implemented in comparison with the critical attributes and assumptions identifed within the preliminary model. Such evaluation processes check program components against previously stated or logically implied criteria. Evaluation functions of this type not only check for the internal validity question of whether the program is delivering the anticipated outcomes but also whether the implemented model deviates from its original philosophic position.

Concerns related to this latter type of validation question were examined in the previous section. Ruminations and analysis in this area suggested the original conceptual scheme may have neglected to include the following areas with the CBTE model:

(1) Modules designed to facilitate affective growth and development among pre-service secondary teachers.

(2) Modules designed to train secondary teachers in organized affective growth and development among their students.

(3) Provision for synthesis and integration across individual modules.

(4) Power sharing among faculty and student in organizing and planning instructional programs.

(5) Construction of instructional alternatives for each collection of objectives organized into a module.

Evaluation at a higher level suggests different kinds of questions

be considered. Typical of these questions are the following:

(1) Is the module format an effective delivery system for promoting competence?

(2) Which modules, given they are effective, appear most efficacious?

(3) Are the behaviors selected and used by a CBTE trained in-service teacher those in which he has been trained?

(4) How effective are CBTE trained secondary teachers when measured in terms of student performance?

A central focus of the retreat was to generate potential research questions which may furnish evidence to evaluate the program at all of the levels of complexity implied in the previous discussion. Using a free-wheeling, brainstorming format to generate research possibilities, the following list of preliminary questions were formulated:

1. Compare University of Toledo CBTE graduates'teaching performance with students from other institutions--based on CBTE criteria.

2. Are the perceptions of our students congruent with perceptions of their supervisors and cooperating teachers with respect to their teaching proficiency?

3. What affective outcomes and socialization occur when our trainees become teachers?

4. What changes take place in our students'perceived locus of control of their own teaching between entrance and exit from our program?

5. What is the perception of the utility of their undergraduate courses by our trainees after their first year of teaching?

6. What are the Flanders results (especially I/D ratio) of our trainees during student teaching?

7. What performance differences occur when comparing self-paced vs. forced-paced instruction?

8. What performance differences occur when comparing self-instruction vs. other instructional strategies?

9. What qualitative factors correlate with differences between students who master objectives the first time vs. those needing two recycles?

10. Using a regression analysis can we identify those factors (e.g. SAT) most predictive of success in our program?

11. What deficiencies in performance in our program result from preparation in the Arts College?

12. Can cooperating teachers predict future success in the professional year for the Career Decision students?

13. What relationships exist between the kind of teaching strategies used in the pre-service program and the frequency of recycling attempts?

14. What performance differences exist among students prepared for generic competencies but who have different teaching content majors?

15. What relationship exists, if any, between mastery learning and school anxiety?

16. Do high school training and other factors correlate with student success?

17. Are our doctoral students better change agents in the local area than those who received degrees from other institutions?

18. Are those students going through our leadership programs more receptive to change?

19. Are there different roles or patterns of behavior for faculty in CBTE than in regular programs?

20. How does staff utilization relate to student success?

21. What are the attitudes of school children to those teachers who were our trainees?

22. What characteristics of a school environment maintain innovation?

23. Are our students perceived as more successful in a setting seen as innovative than in a traditional setting?

24. How transportable is our program? Is it a "Cult of Personality"?

25. What changes in self-concept occur for students in a criterion-

referenced program resulting from placement in a non-norm referenced situation?

26. To what extend does our program develop intrinsic motivation to be a better teacher? To what extent are they interested in their students' learning?

27. What are the relationships between our students' teaching strategies and their pupils' outcomes?

28. Given a set of objectives, can our students produce those outcomes with their pupils?

29. What job satisfaction differences exist among faculty who work with the CBTE program and those who do not?

30. What affective outcomes occur as a function of team teaching?

An analysis of the above topics revealed several classes of research investigations implied by the kinds of questions posed. These categories are represented in Table 1 with questions indicated according to their number in the list.

Table 1

Focus of Research	Cognitive/ Systems Data	Affective Data	Social Change
CBTE Faculty	13, 24	24, 29	19,20,24
CBTE Students	1,6,7,8,9,10 13,14,26	3,4,5,10 15,21,25,26	
Subjects taught by CBTE trained Students	21,27,28	27,28	27,28
Public School Personnel	12	12	15,16,17
Comparisons Among Groups	2,13,23	2,23	23

Even a cursory examination of the preceding list of research topics and accompanying table reveals questions directed at all levels of sophistication, complexity and data accessibility. Considering basic program validation several questions must assume a more immediate and pressing priortiy than others. Some are necessarily long range, while others can be attacked immediately.

A useful construct for organizing existing and potential program research questions is to refer to Richard Turner's model for levels of criterion performance. This model suggests validation can occur and data can be collected as assessments are made within the following levels:

1. Long range outcomes achieved by the trainee (now a certified and employed teacher) with the pupils he teaches.
2. Short range outcomes achieved by the trainee with the students he teaches.
3. Demonstration of "teaching" behaviors in a field based classroom.
4. Demonstration of "teaching" behaviors in a micro-teaching context.
5. Demonstration of trainee's possession of specific "teaching" skills.
6. Understanding selected behaviors, concepts or principles germane to teaching.

Matching the research questions generated against the criterion performance levels specified in Turner's models holds several implications for the Secondary CBTE Program at this stage in our formative evaluation. In the first place the faculty already has collected much data accounted for in levels four, five, and six. They have access to much more data and should have little difficulty recording, analyzing and reporting the data using the existing computer management system. Up to the present time evaluation has lagged less in collecting data and more as a function of converting it to the management system, interpreting it and reporting it through articles, monographs and papers delivered at conventions. Faculty members acknowledged the necessity for being more diligent and organized in the future for tapping the wealth of data already capable of being collected to assess our relative effectiveness. Team leaders were charged with deploying faculty members on each team for initial research data collection for the next quarter.

With regard to level three, much discussion was generated around our dependence on the public school field experiences as being the "real" and "immediate" laboratory setting for validating our program efforts. Commentary reflecting our success and shortcomings in tapping this area of research potential is expanded in the final section of the paper. Suffice it to say that the secondary faculty teams are concerned with developing this area of our program and have identified this level of criterion performance as representing the prime target area for wholesale research and evaluation during the coming year. Faculty members indicated that the existing modules for assessing student field performance represented the starting point for such investigations.

Turner's criterion levels one and two were acknowledged as being important concerns but of less immediate attention than the preceding levels. Faculty seemed agreed that we needed more of a comprehensive data base relating to questions formulated in assessing levels three through six before much discussion was focused upon the behaviors of Secondary CBTE Program trainees as in-service teachers. These criterion performance levels were set aside as deserving attention at a second conference on formative evaluation.

Field-Based Research as the Benchmark of CBTE

The field-based component of the University of Toledo's Secondary CBTE program attempts to provide necessary classroom laboratories for validating the on-compus effort. Skills, concepts, and proclivities acquired through program modules are to be demonstrated in actual classroom environments. Since the field-based requisites are an integral part of the total training program - extending throughout the entire professional year sequence - this is no mean feat.

The placement of secondary teacher-candidates for the three-quarter sequence which comprises the professional year presents a major challenge. Added to this placement problem are the complex communications issues which seem to be inevitable in this type of off-campus, in-school laboratory setting. First, it is critical to consider whether or not an individual placement (in a classroom or school) is supportive for the teacher-candidate. That is, will the candidate be able to, or more importantly, be encouraged to demonstrate the competencies which have been acquired in the formal module program? Secondly, are the personnel assigned to monitor the teacher-candidates adequately prepared and skillful in accurately assessing the requisite teaching strategies and skills? The in-service education effort needed to prepare co-operating teachers in appropriate evaluation and assessment techniques is but one more major contingency which must be met. Third, can the data retrieved by co-operating teachers and university supervisors be shared by all interested parties - teacher-candidates, teachers, and supervisors - in mutually understood and beneficial ways? The problems of semantically clear and co-operatively shared understandings represent yet another area of significant concern. Fourth, can mutually derived "pay-offs" of significant worth be established so that school personnel can derive

appropriate rewards and personal satisfactions for having participated in this type of experience? Monetary rewards, adjunct faculty states, clinical masters or specialist degree credits, and educational vouchers to be used at the teacher's discretion are all appropriate remuneration possibilities. Fifth, are university supervisors, both full-time and part-time faculty, adequately prepared in both supervisory and interpersonal skills? Nothing creates more chaos, anguish, and frustration than supervisors who are ineffective evaluators or who lack the ability to establish essential rapport with their public school counterparts. Furthermore, university professors are not automatically effective supervisors solely by virtue of their positions.

Obviously, these aforementioned five topics provide a rich milieu for research activities. Moreover, a CBTE field-based program is uniquely amenable to rigorous research and evaluation. Since publicly stated criteria are accompanied by statements which delineate overt student performances, CBTE practitioners are obliged to meet their claims or to recant. There is no room for easy vacillation; one must put up or shut up! In effect, the benchmark whereby CBTE claims are verified or rejected is research! Research then becomes a sine qua non which can both realize the promise(s) a CBTE mission avows or can potentially threaten every claim and goal set forth. Therefore, CBTE field-based programs demand from their adherents and practitioners a public research effort which must stand the tests of verification, replication, and predictability. These are severe self-imposed demands which few, if any, existing teacher education programs make for their advocates.

Finally, CBTE field-based teacher education efforts, with their attendant research demands, outrightly reject the notion of the ascendancy of a new orthodoxy. The hallmark of program development under the CBTE umbrella is continuous renewal and revitalization.

Appendix A

PRELIMINARY RETREAT AGENDA

I. MAJOR PRAGMATIC CONCERNS:

____ 1. Do we have the luxury of unlimited time to have students recycle module components without regard for money, years at school, professor's availability, or personal choice to terminate in a given module?

____ 2. Do we have the luxury of time for staff to develop the kind of program we say we want or profess to believe is best? What limitations, if any, appear to restrict "quality" program development?

____ 3. Is team teaching a pre-requisite for a successful CBTE program? What advantages has team teaching afforded the program development and implementation? What has been its liabilities? Will team teaching promise to facilitate our forthcoming efforts to validate the program in emperical terms?

____ 4. Are teams presently organized for maximum effect? Should all secondary team members not be expected to rotate on a regular basis through 340, 310 and C.D. 102? What are the benefits and liabilities of our present team composition?

____ 5. How might our program be reorganized or restructured to increase the professional "payoff" for work in the program with regard to the following considerations: equity, research time, visibility, recognition for module development, program travel, and consultation opportunities?

____ 6. Are the objectives which we are currently using at levels of complexity that actually simulate the real world of teaching or do they focus on simple, micro-bits of the teaching world? How might our program be organized to increase the probability of achieving a synthesis or Gestalt of the modules mastered?

II. Major Philosophic Concerns

____ 1. Validation of objectives-- What banks of evidence exist that make our program and module objectives credible and necessary? Assuming that our current objectives could only pass a "face validity muster" what procedures might we adopt to establish an empirical justification for our program objectives?

____ 2. "Homodularization"-- When our objectives require each student to demonstrate a minimal level of competency, aren't we contributing to the myth of human equality by treating unequal people as equals? How might we structure our objectives and grading system to reflect this basic inequality?

3. Nobility vs. Utility-- If Stephen K. Bailey is correct, "...the ultimate function of education is to restore man's sense of his own nobility"-- then how do we justify the fact that our secondary CBTE program is primarily skill-based in form?

4. Does a skill-based program provide a student with a sufficient base for entering the world of teaching? What regions that aren't entirely skill-oriented appear worthy of inclusion in a CBTE program?

5. Is the classical debate between the "behaviorists and the humanists" worth our time at this point in our development?

6. Should we be concerned to ensure that affective dimensions of teaching and learning have a more substantive role in our overall effort? Which areas called affective education should be part of the CBTE modules? When we suggest that "affective demensions" are neglected in our program, are we talking about the kind and quality of affect among our learners as they function as students in our program or in our ability to generate modules which will enable them to develop a climate of high "interpersonal regard" among students in their classrooms when they are teachers?

7. Ought our pre-occupation with launching CBTE and making it a reality be of such import to the college that criticism, sharp debate and program analysis are discouraged-- especially to the extent that staff morale may be threatened? What procedures might we adopt to ensure that all opinions are heard and have an appropriate forum for analysis and discussion? Besides more retreats??

III. MAJOR INTEGRATIVE QUESTIONS

1. What's good about our program and ought to be maintained?--"enlightened persistence." Are there any ways in which to evaluate these components or features and report or describe them in journals at the state or national level?

2. What has happened to us as a cooperative faculty as a derivative of implementing the CBTE program which would have been an unlikely event without the massive curriculum effort?

3. Has CBTE as we have inaugurated it in the public schools through our students and through our roles as supervisors and facilitators yielded the kinds of results we have anticipated? Might public school personnel be utilized and involved in any other ways than those in which they are now functioning? How might we more equitably increase their "payoff" in terms of services rendered?

____ 4. Are we making best and most efficient use of our manpower--both in terms of teaching effectiveness and in using their diverse and interdisciplinary backgrounds?

____ 5. Have we been able to maintain academic freedom for professors in the delivery of CBTE components?

IV. IMMEDIATE AND PRESSING ISSUES

____ 1. How shall we schedule ourselves with the additional time allotted for Fall 1974?

____ 2. How and in which areas shall we mass our efforts in order to conduct short and long term research on our program and all its key aspects?

____ 3. What kinds of publishing efforts might we embrace immediately as individuals and particularly as faculty teams?

____ 4. What new modules must be added for next year and what revisions must be mounted during this semester?

____ 5. In what ways might we use the management system which Dr. Gentry and others have developed in order to collect and interpret data about our students and program?

____ 6. Do we as a faculty feel it is feasible with in the near future to develop alternative modules which are largely self-instructional which might be utilized by students as alternatives to our class-based efforts? What objectives do we have which would not be accomplished in such a format?